

multiple liner regression analysis. **RESULTS:** The mean utility scores (SD) were 0.75(0.19) for EQ-5D and 0.68(0.12) for SF-6D. Validity was demonstrated by the moderate to strong correlation coefficients (range: 0.404–0.594, $P < 0.001$) for four of the eight hypotheses in both EQ-5D and SF-6D. There were no serious ceiling effects for EQ-5D and SF-6D but floor effects for EQ-5D were large. SF-6D showed a better discriminative capacity ($ES = 0.573$ – 1.179) between groups with different SAP-specific health status than EQ-5D ($ES = 0.385$ – 0.851). RE showed that SF-6D (32.7–218.7%) was more efficient than EQ-5D. The areas under ROC of them all exceeded 0.5 (0.661–0.814, $P < 0.001$). Poor agreement between them was observed with ICC (0.477, $P < 0.001$) and Bland-Altman plot analysis. Multiple liner regression showed that clinical variables significantly ($P < 0.05$) influenced differences in utility scores between EQ-5D and SF-6D. **CONCLUSIONS:** This study provides evidence that EQ-5D and SF-6D are valid and sensitive preference-based HRQoL instruments in Chinese SAP patients. SF-6D may be a more effective tool with lower flooring effect and greater sensitivity. Further study is needed to compare other properties, such as reliability and longitudinal response.

GASTROINTESTINAL DISORDERS - Clinical Outcomes Studies

PGI1

ACNE DRUG THERAPY AND THE DEVELOPMENT OF COMORBID INFLAMMATORY BOWEL DISEASE IN THE UNITED STATES

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OBJECTIVES: Previous studies have shown associations between isotretinoin treatment and inflammatory bowel disease (IBD) and suspected that acne treatment with isotretinoin carries an increased risk of developing IBD. The association between acne drug therapy and incidence of IBD with adjustment of potential confounders, however, remains unclear. This study evaluated the effects of drug therapies on the development of IBD in acne patients. **METHODS:** A longitudinal retrospective study was conducted using the 2003–2007 MarketScan Medicaid Claims dataset representing 176,889 eligible patients with acne vulgaris. The Cox proportional-hazard survival analysis was performed to obtain the hazard ratios (HRs) of IBD development, adjusting age, race, sex, physician specialty, Charlson Comorbidity index (CCI), cumulative dosage of isotretinoin and acne drug treatment. **RESULTS:** A total of 492 of the patients had an IBD occurrence within the study period. Black patients had lower hazard of developing IBD than white patients ($p < 0.01$). Compared with adults, youths and children were less likely to have an IBD occurrence (all $p < 0.01$). Patients seen by dermatologists are associated with a 51% higher hazard of developing IBD ($p < 0.01$). Patients whose acne was treated with oral antibiotics, topical antibiotics, or topical glucocorticoids were less likely to develop IBD (HRs = 0.45, 0.42, 0.51, respectively; all $p < 0.05$) compared with those without these drugs. Patients with a higher cumulative dosage of isotretinoin treatment had an 87% lower hazard of developing IBD (HRs = 0.13; $p < 0.05$). A unit increase in CCI was associated with a 17% higher hazard of IBD incidence ($p < 0.01$). **CONCLUSIONS:** The likelihood of IBD occurrence in acne patients treated with drug therapy varied with age and race, consultation with dermatologists, and acne medication. The higher cumulative dosage of isotretinoin treatment was associated with a lower risk of developing IBD. With adding confounding controls to the analysis, the relationship between isotretinoin treatment and IBD development reveals different results from previous studies.

PGI2

GASTROPROTECTIVE EVALUATION OF PHYLLANTHUS EMBLICA IN THE PATIENTS WITH GASTRIC ULCERS

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OBJECTIVES: The ethanolic extract of dried fruits of *Phyllanthus emblica* Linn. was investigated for its gastroprotective effects in the patients with gastric ulcers. **METHODS:** Finely ground dried fruit weighing 500g was soaked in one litre of absolute alcohol for 24 hrs at room temperature with occasional shaking. Filtrate was evaporated on rotary evaporator under reduced pressure at 40°C to a thick, semi-solid mass. Phytochemical analysis was carried out for alkaloids, saponins, anthraquinones, flavanoids and tannins. For in-vivo activity, thirty patients with known gastric ulcers were randomly divided into three groups naming test, positive control and negative control group, respectively. 500 mg of dried residue of *Phyllanthus emblica* in three divided doses, i.e. 166.6 mg in each capsule containing the sufficient amount of lactose to make the bulk of capsule up to 500 mg was administered to test group for 14 days. The same coloured capsules filled with lactose 500 mg were given to the patients of negative control group (placebo group) for 14 days. Similarly, Omeprazole 40 mg/day was given to the patients of positive control group for same time duration. Both questionnaire and endoscopic investigation based procedures were adopted to investigate the effects in three groups. **RESULTS:** Phytochemical screening of plant confirmed the presence of alkaloids, anthraquinones, saponins, sterols, terpenes, flavanoids and tannins. Patients in test group reported significant reduction ($p < 0.05$) in intensity and duration of stomach pain especially, at night when compared with negative control group. Positive control group, however, reported absolute reduction in complaints associated with gastric ulcer. Endoscopic examination by expert gastroenterologist reported significant healing of ulceration in positive control and test group, respectively. **CONCLUSIONS:** The results of the study indicated that the ethanolic extract of *Phyllanthus emblica* fruits have gastroprotective effects in diseased humans. These effects can be further enhanced by further fractionation of active constituents of plant material.

PGI3

DETERMINATION OF EFFICACY, ADVERSE DRUG REACTIONS AND COST EFFECTIVENESS OF THREE TRIPLE DRUG REGIMENS FOR THE TREATMENT OF H. PYLORI INFECTED ACID PEPTIC DISEASE PATIENTS

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OBJECTIVES: To evaluate the clinical outcome and *H. pylori* infection status by GLQI and PCR, before and after the triple (CMO, CAO or LTC) treatment regimen. **METHODS:** Salivary samples of 225 patients of acid peptic disease were used to determine the infection status and GLQI score before and after treatment regimen. Information regarding direct/indirect costs incurred, clinical outcome and side effects of drugs were determined by interviewing the patient and validated questionnaires. **RESULTS:** Infection status was determined by successful amplification of 16s rRNA and Cag T genes. Positive eradication rate was 72.7% in males and 70% in females in CMO treated, 88.13% in males and 87.5% in females in CAO treated and 84.44% in males and 96.67% in females in LTC treated patients. The highest improvement in the GLQI score after the treatment regimen was visible in the LTC treated group with a change of 65.39, followed by CAO treated patients with a change of 49.73 and CMO treated patients with an improvement of 32.18. The average cost effectiveness ratio was found to be best in the CAO treatment regimen with a ratio of 9.43 followed by LTC treatment regimen with a ratio of 11.74 and CMO with a ratio of 49.13. Side effects like diarrhea, nausea, bad taste and metallic taste were significantly enhanced in CMO ($P < 0.001$) when compared to CAO and LTC treatment regimens. **CONCLUSIONS:** The present investigation suggests that LTC has better efficacy and safety profile, but CAO is most cost effective amongst the three treatment regimens. PCR assay can be scaled up for hospitals or clinics as a cost effective non invasive diagnostic test.

PGI4

ASSESSING THE USE OF A HARMONIC SCALPEL IN LAPAROSCOPIC CHOLECYSTECTOMY: A SYSTEMATIC REVIEW OF THE EVIDENCE

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OBJECTIVES: To evaluate the use of a harmonic device, compared to mono- and bi-polar electrosurgical dissection, in the laparoscopic removal of the gallbladder. **METHODS:** A systematic review of the literature (via EMBASE and Medline databases) initially identified 832 publications. Based on a priori defined eligibility criteria, 10 randomised controlled trials were included in the final analysis. **RESULTS:** Meta-analysis of the included studies showed that mean operating time was 17.0 minutes shorter (95%CI: 7.5, 26.6) in the harmonic scalpel group. Use of the harmonic scalpel was associated with a 7% reduction in the overall risk of complications and a 25% reduction in the risk of gallbladder perforation, compared to the electrocauterisation group. Four studies measured subjective post-operative pain using a 10-point visual analog scale, where a patient would rate their peak pain from 0 (no pain at all) to 10 (worst pain imaginable) at prescribed time points during follow-up. Patients who underwent the harmonic procedure rated their post-operative pain significantly lower than those patients who underwent electrosurgery (mean difference [95%CI], points: -1.1 [-1.5, -0.7]; $P < 0.0001$). **CONCLUSIONS:** Despite heterogeneity amongst the trials, the laparoscopic cholecystectomy procedure performed with a harmonic scalpel appears to offer a number of advantages over conventional mono- and bi-polar electrosurgery. These include a shorter operating time, lower rate of complication, and milder post-operative pain. In particular, the risk of gallbladder perforation was 25% lower in those patients who received the harmonic intervention. Gallbladder perforation can lead to serious post-operative infection, particularly if bile enters the operative cavity. As such, minimising these events would likely reduce the average length of hospitalisation as well as treatment costs associated with the procedure. This evidence supports the use of the harmonic scalpel over conventional electrocautery devices in laparoscopic cholecystectomy.

PGI5

INCREASING DEMANDS FOR MEDICAL AND DRUG UTILIZATION IN PATIENTS WITH LONG-TERM IRRITABLE BOWEL SYNDROME IN TAIWAN

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OBJECTIVES: Irritable bowel syndrome (IBS) is a relapsing, chronic functional gastrointestinal disorder with continuous nuisance bowel symptoms leading to long-term disturbances to patients. The disease burden of long-term IBS, however, is generally neglected in Taiwan. This study aimed to evaluate medical and drug utilization for IBS outpatients receiving long-term medical treatments in Taiwan. **METHODS:** This cross-sectional study was conducted from 2004 to 2008 using a Longitudinal Health Insurance Database constituting of a million beneficiaries randomly sampled in 2005. Adult IBS outpatients' medical claims and prescriptions data were extracted and medication possession ratio (MPR) was calculated based on anti-IBS prescriptions (i.e. anti-propulsive, anti-spasmodics, propulsive, anti-depressive agents and laxatives). Patients whose accumulated prescription duration for more than 90 days and MPR > 80% were included as study cohort and their medical and drug utilization were assessed. Monthly trends of medical and drug utilization were analyzed by simple linear regression and stratified by gastroenterology specialists and tiers of medical facilities. **RESULTS:** Only 1451 (3.5%) patients were included, but this cohort (mean age 60.8 ± 16.7 years; 54.0% male) contributed to 20913 visits, 20.3% medical cost and 70.5% drug cost of the 40890 IBS outpatients. Number of outpatient visits and total medical cost in study cohort significantly increased over time ($p < 0.01$), particularly in regional hospitals. Number of visits to